

GP-302066

## INTEGRATED SPIRAL AND TOP-LOADED MONOPOLE ANTENNA

### ABSTRACT OF THE DISCLOSURE

A low-profile antenna provides dual simultaneous operation. A first antenna has a circular polarization radiation pattern. A monopole antenna includes a hollow tube and is top-loaded by locating a disk on top of the hollow tube. A support structure positions the monopole antenna between the first antenna and a ground plane. The first antenna is a four arm spiral antenna. The four arm spiral antenna and monopole antenna are each fed by a cable with a first conductor and a second conductor. The radiation pattern of the four arm spiral antenna is maximum at forty-five degrees above the horizon and is null toward the horizon. The cable excites the monopole antenna with respect to the ground plane to transmit/receive vertical polarized signals. The radiation pattern of the monopole antenna is maximum towards the horizon. The first antenna and the monopole antenna operate simultaneously.